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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,700

08/05/2003

A-Jung Kim

5000-1-438

7551

33942

7590

10/19/2006

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EXAMINER

LOVING, JARIC E

ART UNIT

PAPER NUMBER

2137

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/634,700	Applicant(s) KIM ET AL.	
	Examiner Jaric Loving	Art Unit 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/6/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: "methodcomprising" should be --method comprising--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sala et al., US 2003/0117998 and further in view of Rothenberg, US 5,432,850.

In claim 1, Sala discloses a method for transmitting security data between an OLT (Optical Line Termination) and a destination user in an EPON (Ethernet Passive Optical Network) system having a plurality of ONUs (Optical Network Units) connected to a plurality of users and the OLT the methodcomprising the steps of:

a) a security frame having an ONU ID field for indicating ONU ID information identified by an ONU with the destination user and a user ID field for indicating a security ID identified by the destination user (paragraphs [0009]-[0012], [0058]-[0061]; [0069], [0076], [0079], [0114]); and

b) transmitting the transmission frame (paragraphs [0009]-[0012], [0047]-[0048], [0051]-[0053]).

Sala fails to disclose creating a transmission frame comprised of a data field for encrypting the security data and a key information field for storing key information used for decrypting the encrypted data of the data field. Rothenberg discloses creating a transmission frame comprised of a data field for encrypting the security data and a key information field for storing key information used for decrypting the encrypted data of the data field (col. 3, lines 18-57).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Sala's method of forwarding frames within an optical network with Rothenberg's method for secure data transmission utilizing data encryption and a key to enhance security. It is for this reason that one of ordinary skill in the art would have been motivated to provide Sala's method of forwarding frames within an optical network with data encryption and a key because it allows a secured transmission of data on a shared network (Rothenberg, col. 2, lines 1-8).

In claim 2, Sala, as modified, discloses the method as set forth in claim 1, wherein the security frame further includes a designator field for storing information of a group of the ONUs and the users (Sala, paragraph [0058]).

In claim 3, Sala, as modified, discloses the method as set forth in claim 1, wherein the security frame further includes a MDF (Management Defined Field) for storing MIB (Management Information Base) information and associated protocol information (Sala, paragraph [0058]).

In claim 4, Sala, as modified, discloses the method as set forth in claim 1, further comprising the step of: c) transmitting the transmission frame to the users connected to

the ONUs for identifying the ONU ID field contained in the security frame of the transmitted frame (Sala, paragraphs [0009]-[0012], [0047]-[0048], [0067]-[0069], [0076]).

In claim 5, Sala, as modified, discloses the method as set forth in claim 1, further comprising the steps of: selecting at least one user who can identify contents of the ONU ID field contained in the security frame from among the plurality of users connected to the ONUs for identifying the ONU ID field, and transmitting the transmission frame to the selected user (Sala, paragraphs [0050]-[0053], [0058], [0066]-[0069] – at least one subscriber selected to use services).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Skret, US 4,980,913.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaric Loving whose telephone number is (571) 272-1686. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2137

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JL



EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER